

REMARKS

In the Office Action, the disclosure is objected to due to an indicated informality. In this regard, by this Response to Office Action, Applicant has amended the Specification in the Abstract and in accordance with the Examiner's suggestion.

In the Office Action, Claim 7 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,620,301 to Koide. Claim 8 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,078,467 to Akutsu et al. By this Response to Office Action, Applicants have canceled without prejudice independent Claims 7 and 8 each directed to a spindle motor.

Further in the Office Action, Claim 15 was rejected under 35 U.S.C. §103(a) as being unpatentable over the Koide reference in view of U.S. Patent No. 4,870,518 to Thompson et al. Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over the Akutsu et al. reference in view of the Thompson et al. reference.

By this Response to Office Action, Applicants have amended Claim 15 to require that the recited head stack assembly is positioned to pivot over the at least one bare stator tooth. Applicants respectfully submit that the cited art references fail to teach or suggest particularly positioning the head stack assembly in relation to the stator such that the head stack assembly would pivot over a bare stator tooth.

The cited Koide reference teaches a spindle motor such as shown in Figures 9-10. The spindle motor includes a stator 7000 that has a plurality of internally facing stator teeth. The stator 7000 is generally pie shaped covering about 315 degrees of arc. This allows for a gap in which a radial feed unit 3000 is positioned between the stator teeth. The Office

Action asserts that it would be obvious to substitute such Koide spindle motor arrangement for the spindle motor utilized in a disk drive as taught by Thompson et al.

With regard to currently amended Claim 15, Applicants respectfully submit that the cited art references fail to establish a prima facie case of obviousness as neither of the cited art references teach or suggest positioning the head stack assembly to pivot over a bare stator tooth. Therefore, the combination of the references also can not teach or suggest positioning the head stack assembly to pivot over a bare stator tooth.

Moreover, it is improper to combine the Koide reference with the Thompson et al. reference because the central purpose of the invention disclosed by the Koide reference would be defeated by the suggested combination. The stated object of the invention of the Koide reference is to provide "a recording disk drive unit which is small in size and low in profile." (col. 1, lines 38-40) Such object is achieved through the use of a spindle motor having a C-shaped stator with a recess in which one end of the radial feed unit is positioned. This allows the disk drive unit to be low in profile. (col. 1, lines 41-54) The combination suggested by the Office Action would require that an actuator be positioned above the C-shaped Koide stator and outside of the recess. This would result in a thicker profile defeating the stated purpose of the C-shaped stator design taught by the Koide reference.

Nevertheless, to the extent the one still would be inclined to combine that Koide spindle motor arrangement in the Thompson et al. disk drive, it would be logical to do so with a voice coil actuator assembly 112 positioned between the stator teeth (just as the radial feed unit 3000 of the Koide reference is disclosed to be positioned between the stator teeth). Accordingly, Applicants' respectfully request reconsideration as to the applicability of the Koide and Thompson et al. references with regard to currently amended Claim 15.

By this Response to Office Action, Applicants have amended Claim 16 to require that the recited head stack assembly is positioned to pivot over the at least one reduced winding height stator tooth and not over any of the remaining stator teeth that are not a reduced winding height stator tooth. Applicants respectfully submit that the cited art references fail to teach or suggest particularly positioning the head stack assembly in relation to the stator such that the head stack assembly would pivot only over reduced winding height stator teeth.

The Akutsu et al. reference teaches a stator with internally facing teeth. Some of the stator teeth have windings of a full height (second coil units 8b) and some have windings of a comparatively reduced height (first coil units 8a). A stator cover 14 is provided over the teeth. Where there are teeth having the reduced height windings, the cover is thicker so as to have a uniform cover height above all of the teeth. This is best seen in the cross sectional views of the stator, such as in Figure 3.

With regard to currently amended Claim 16, Applicants respectfully submit that the combination of cited art references can not support a prima facie case of obviousness as neither of the cited art references teach or suggest positioning the head stack assembly to pivot over at least one reduced winding height stator tooth and not over any of the remaining stator teeth that are not a reduced winding height stator tooth.

Moreover, it is improper to combine the Akutsu et al. reference with the Thompson reference because the the stated purpose of the invention disclosed by the Akutsu et al. reference would be defeated by the suggested combination. The stated object of the invention of the Akutsu et al. reference is to provide "a thin magnetic recording apparatus by more effectively utilizing the technique of thinning a frame by press working, forming , or

the like” and to provide “a thin magnetic recording apparatus in which the strain in a frame is reduced and its rigidity is secured.” (col. 2, lines 14-21).

In order to achieve such objectives, the Akutsu et al. disk drive includes a stator 7 with a plurality of tooth-like pole blocks 7a-e (i.e., stator teeth) and a stator cover 14 with a plurality of cover-side accommodating portions 15. The pole blocks 7a-e are covered with windings, denotes as first coil units 8a and second coil units 8b of differing winding height. As seen in Figure 8 for example, the first coil units 8a are reduced in thickness relative to second coil units 8b. The relatively thicker first coil units 8a are accommodated in the respective cover-side accommodating portions 15. Therefore, the thickness of the disk drive can be reduced by the difference in the number of layers of the first and second coil units 8a, 8b. (col. 3, lines 50-63; col. 4, lines 35-44; col. 5, lines 45-59)

The combination suggested by the Office Action would require that an actuator be positioned above those pole blocks having the second coil units 8b of the reduced winding height and not over those pole blocks of the thicker first coil units 8a. In order to take advantage of the winding height difference between the first and second coil units 8a, 8b by positioning an actuator only over the second coil units 8b, the stator cover 14 over the second coil units 8b would have to be modified and reduced in thickness. However, such a reduction in thickness of the stator cover 14 would frustrate the object of the Akutsu et al. reference of securing rigidity of the overall disk drive unit.

Nevertheless to the extent the one still would be inclined to combine that Akutsu et al. spindle motor arrangement in the Thompson et al. disk drive, neither reference discloses any motivation to position a voice coil actuator assembly 112 over those stator teeth that have the reduced winding height and not over any of the remaining ones. This is because the stator

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cover is overlaid the stator teeth and there would be no differentiations in terms of vertical height that would motivate positioning the coil actuator assembly 112 to pivot only over selected portions of the stator. Accordingly, Applicants' respectfully request reconsideration as to the applicability of the Akutsu et al. and Thompson et al. references with regard to currently amended Claim 16.

As such, Applicants respectfully submit that the cited prior art references can not support a prima facie case of obviousness of any of the presently pending claims. On the basis of the foregoing, Applicants therefore submit that each basis for rejection and objection has been fully addressed, and therefore the Application is in condition for allowance.

Should the Examiner have any suggestions for expediting allowance of the application, the Examiner is invited to contact Applicants' representative at the telephone number listed below. Should any additional fees be due please charge Deposit Account No. 19-4330.

Respectfully submitted,

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By: Eric L. Tanezaki

Customer No.: 007663

Eric L. Tanezaki
Registration No. 40,196
STETINA BRUNDA GARRED & BRUCKER
75 Enterprise, Suite 250
Aliso Viejo, California 92656
Telephone: (949) 855-1246
Fax: (949) 855-6371